

1 1. A method of stripping an unreacted alcohol from an ester
2 product mixture by using a rotating packed bed, the ester product having
3 10-30 carbon atoms, said method comprising the following steps of:

4 (a) feeding the ester product mixture into a rotating packed bed
5 which is mounted rotatably on an axis in a housing, so as to enable the
6 ester product mixture to flow radially to move past a packing located in the
7 rotating packed bed; and

8 (b) introducing a gas into the rotating packed bed such that the
9 gas comes in contact with the ester product mixture at the time when the
10 ester product mixture flows radially to move past the packing, and that an
11 unreacted alcohol contained in the ester product mixture is stripped by
12 means of a gas entrainment and is then discharged via an exit port on the
13 top of the housing, and that a purified ester product is collected at the
14 bottom of the housing.

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16 2. The method as defined in claim 1, wherein the ester product
17 mixture product is fed into the rotating packed bed via an axial area of the
18 rotating packed bed.

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20 3. The method as defined in claim 2, wherein the gas is
21 introduced into the rotating packed bed via the fringe of the housing,
22 thereby enabling the ester product mixture to come in contact with the gas
23 in such a way that the flow direction of the ester product mixture is
24 opposite to the flow direction of the gas at such time when the ester
25 product mixture flows radially to move past the packing.

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1 4. The method as defined in claim 2, wherein the gas is
2 introduced into the rotating packed bed via the axial area of the rotating
3 packed bed, so as to enable the ester product mixture to come in contact
4 with the gas in such a way that the gas and the ester product mixture flow
5 in the same direction at such time when the ester product mixture flows
6 radially to move past the packing.

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8 5. The method as defined in claim 2, wherein the gas is
9 introduced into the rotating packed bed via a bottom of the rotating
10 packed bed such that the gas is discharged from a top of the rotating
11 packed bed, and that the gas and the ester product mixture come in
12 contact with each other at an angle at such time when the ester product
13 mixture flows radially to move past the packing.

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15 6. The method as defined in claim 3, wherein the axial area of
16 the rotating packed bed is exerted on by a negative pressure, so as to
17 enable the ester product mixture to come in contact with the gas under
18 lower pressure at such time when the ester product mixture flows radially
19 to move past the packing, with the unreacted alcohol entrained by the gas
20 being discharged from the top of the housing via the axial area of the
21 rotating packed bed.

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23 7. The method as defined in claim 1 further comprising recycling
24 the purified ester product of the step (b) as a whole or partially to step (a)
25 as a feed, so that an ester product having a desired purity is obtained.

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1 8. The method as defined in claim 1, wherein the ester product is
2 butyl stearate, with the unreacted alcohol being n-butanol.

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4 9. The method as defined in claim 1, wherein the ester product is
5 2-ethyl hexyl palmitate, with the unreacted alcohol being 2-ethylhexyl
6 alcohol.

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8 10. The method as defined in claim 1, wherein the gas referred
9 to in the step (b) is nitrogen, carbon dioxide, argon, or steam.